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AUTHOR Cho, Sook Whan
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ABSTRACT

A study of Korean children's interpretation of the reflexive pronoun "caki" when it precedes a third person noun phrase, that is, in backward anaphora, had as subjects 4- to 11-year-old children living in Korea. Test sentences designed on the basis of two important syntactic aspects in Korean reflexive anaphora--relational hierarchy and backward principle--were presented to the subjects in both neutral and overtly stated topic contexts. The children's identifications of the antecedent were recorded and analyzed. Results indicate that, in general, the topic context had a greater effect on the children's interpretation than did the neutral context, and that the children's sensitivity to the topic contexts increased with age. Unlike previous research results, however, the older children used context more frequently, but with more selectivity. The children's possible formulation of a hierarchy for referents is also suggested. (MSE)

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The Effect of Context on Korean Children's Interpretation of the Reflexive Pronoun caki [jagi]*

Sook Whan Cho
University of Alberta

Purpose. The present paper examines how Korean children interpret the reflexive pronoun caki in cases where it precedes a third person noun phrase (NP) (- 'Backward Anaphora'). In particular, the study inquires into (a) how children's interpretation of backward anaphora is affected by the presence of a context, (b) how the effect interacts with the child's processing strategies and grammatical rules, and (c) whether context affects children differently at different age levels.

Subjects. Two groups of children (living in Seoul, Korea) were tested for the study. In each group there were sixty children between the ages of 4;0-11;0.

Test Sentences. The reflexive caki refers to a third person singular NP with a human referent. Test sentences have been designed on the basis of two important syntactic aspects for Korean reflexive anaphora, namely, 'Relational Hierarchy' (RH) in (1) and 'Backward Principle' (BP) in (2) below.

(1) Subject/Topic > Objects > Genitive
(2) Argument reflexive (subject, topic, objects) can only precede a higher antecedent ('higher' in the RH).

The RH states that subject, for example, is higher than indirect object, and thus takes priority over indirect object in the interpretation of the reflexive. An example is provided in (3).

(3) (Tom threw, to John, self's ball.)
Tom-i John-eykey caki-uy kong-ul
Tom-Nom John-Dat self-Gen ball-Acc
tenci-ess-tta.
throw-Past-Declar

In (3) Tom (subject) is higher than John (indirect object) and the reflexive can refer only to the former.

Due to the limited scope for this paper, I focus my discussion on the subset of 'S(ubject)>O(bject, direct)>G(enitive)'. Four types of backward anaphora have been designed, as outlined in (4) below (three tokens were devised for each type).

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(4) a. *B(OS)*: (Self, Tom hit.)
Caki-rul Tom-i ttayri-ess-tta.
self-Acc Tom-Nom hit-Past-Declar

b. *B(GO)*: (I, at self's home, hit Tom.)
Nay-ka caki-uy cip-eyse Tom-ul
I-Nom self-Gen home-Loc Tom-Acc
ttayri-ess-tta.
hit-Past-Declar

c. **B(SO)*: (Self hit Tom.)
*Caki-ka Tom-ul ttayri-ess-tta.
self-Nom Tom-Acc hit-Past-Declar

d. **B(OG)*: (I hit self, at Tom's home.)
*Nay-ka caki-rul Tom-uy cip-eyse
I-Nom self-Acc Tom-Gen home-Loc
ttayri-ess-tta.
hit-Past-Declar

The first two B types in (4a-b) are 'Free Backward' cases in which the reflexive can be interpreted either sentence-internally or sentence-externally. The other two *B types in (4c-d) are 'Blocked Backward' structures where the reflexive must be interpreted only sentence-externally. To see how our BP in (2) accounts for the grammaticality in (4), consider, for example, (4a). Note that in this structure the reflexive precedes a higher NP, since the former is *object* which is followed by a *subject* NP Tom. The BP is then obeyed and coreference is allowed. For another example, take *B(OG) in (4d), in which the reflexive (O) precedes a *lower* antecedent (G) in violation of the BP. Thus coreference is blocked in this case. (For further details about (1)-(2), see Cho 1985 and O'Grady 1984.)

Context. Each test sentence was presented to a child in 'neutral' and 'topic' contexts. The 'neutral context' designed for Experiment One was 'These children are now playing together.' This sentence was given before each test sentence while the Experimenter displayed three dolls ('background dolls') whose names had been taught to the children in advance. As this context contains no overt third person singular NPs, simply providing a type of background information, it is called 'neutral context'.

The 'topic context' used in Experiment Two contains an overtly stated topic NP. Each topic context consisted of two simple sentences and three 'background dolls'. The first sentence provided information about someone who is 'topicalized' ('discourse topic') (e.g., 'As for Tom, (he) is my friend'). This discourse topic sentence was then immediately followed by another so-called 'distractor' which was the same throughout the

experiment and stated that '(Discourse Topic) is now playing with these children,' referring to the two other dolls that were present. The distractor did not actually repeat the discourse topic since this element occurs as a null pronoun in this structure in Korean.

Procedure. The Experimenter (E) placed three dolls on a table and said 'Now, I am going to tell you a story. Please listen to me carefully and answer my questions.' E read the contextual information and then gave the child a test sentence. E then asked the child questions about the test sentence, the first of which was always relevant to the interpretation of the reflexive since this was the major concern of the study. E also asked follow-up questions which bore on the general meaning of the test sentence to find out whether the child properly understood the grammatical and semantic relations of the various NPs in it.

Results. Table 1 below shows how often children took as antecedent the sentence-external NP (- *Exophoric* interpretation) in Experiment One involving the neutral context.

Table 1: Experiment One (Neutral Context)
Frequency (%) of Exophoric Interpretations

		B(OS)	B(GO)	*B(SO)	*B(OG)	Mean
K1	(4;5)	39	25	61	28	38
K2	(5;8)	22	14	36	8	20
G1	(7;0)	47	33	64	19	41
G3	(9;0)	31	50	61	58	51
G5	(11;1)	3	19	44	32	25
Mean		28	28	53	29	35

Note in Table 1 that the *B(SO) structures received the exophoric (thus correct) interpretation with the highest frequency (mean 53%), as compared to an overall mean of 35%. It is important to note, however, that even the older children in G1-G5 interpreted the *B(SO) type correctly only 44%-64% of the time. Most of the other responses (total 65%) involved an 'endophoric interpretation' for the reflexive in which children chose an antecedent inside the test sentence. As far as the B patterns of anaphora are concerned, on the other hand, the overall frequency of exophoric responses was relatively low (mean 28%), indicating that children usually chose an antecedent inside the test sentence for this type of construction.

In Experiment Two involving the 'topic context',

children's exophoric responses almost always involved selecting the *discourse topic* as antecedent for the reflexive; other entities (i.e., the two other dolls present in each setting) were rarely taken to be referents for the reflexive. I have therefore organized the data according to how often children selected the *discourse topic* in their exophoric responses. Let us first look at the frequency of exophoric interpretations from each age group. The relevant information is presented in Table 2 below.

Table 2: Experiment Two (Topic Context)
Frequency (%) of Exophoric Interpretations

	B(OS)	B(GO)	*B(SO)	*B(OG)	Mean
K1 (4;8)	11	8	25	14	15
K2 (5;7)	14	31	31	6	21
G1 (6;8)	36	44	83	31	49
G3 (9;2)	36	69	92	42	60
G5 (10;9)	86	75	97	61	80
Mean	37	45	67	31	45

As we can see in Table 2, it was again *B(SO) that was interpreted most frequently with the help of a sentence-external antecedent. Compared to the results of Experiment One, the tendency here is much stronger in that all the older groups (G1-G5) preferred the exophoric interpretation (83%-97%) in sharp contrast with K1 and K2 (25%-31%). The two *B constructions were also treated differently, with at least the older children giving the exophoric interpretation for *B(SO) more frequently than for *B(OG). The significance of the differences between the actual number of exophoric responses for *B(SO) and *B(OG) was tested by a chi square analysis which indicated that the difference was significant ($X^2=4.82$, d.f.=1, $p<.05$).

As far as the B structures are concerned, only G5 strongly preferred the exophoric interpretation (75%-86%) for both B(OS) and B(GO), while G3 interpreted the discourse topic as antecedent more frequently for B(GO) than B(OS) (69% vs. 36%). The exophoric response rate obtained from K1 and K2, on the other hand, was fairly low (6%-31%) on all types of anaphora, and it seems to point to the possibility that these children tended to indiscriminately select the NP inside the test sentence as antecedent, regardless of the syntactic structure.

In contrast with what was observed in Experiment One, it is evident from the means for each age group in Table 2 that the frequency of exophoric responses increases with age, indicating that a developmental trend

has occurred. In general, the older a child was, the more frequently the discourse topic was used to interpret the reflexive. This tendency was strongest for the *B(SO) constructions.

Discussion. As is evident in Table 1, the overall frequency in Experiment One was fairly low and even the older children in G1-G5 used context only at a chance level. As a result, for example, the *B(SO) constructions were largely misinterpreted. The results of Experiment Two, on the other hand, indicated that at least older children correctly interpreted most of the *B(SO) structures by using discourse topic properly. This sharp contrast between the two experiments is presumably due to differences in the context types used in them. Although the neutral context may have successfully created a story-like setting, it is apparently not rich enough to ensure that children singled out a specific third person NP as antecedent. (Recall that no third person singular NPs were mentioned in the neutral context.) This in turn suggests that backward constructions are difficult to interpret in the absence of an appropriate context.

The role of a proper context in the interpretation of the blocked anaphora has also been noted by Suzuki-Wei (1985) in her study of Japanese. Working with sixty Japanese-speaking children (ages 4;0-11;0) on blocked backward anaphora (i.e., *B(SO)) in isolated sentences, she discovered that most of the subjects under the age of 9;0 misinterpreted the structure by taking the NP inside the test sentence to be the antecedent. The percentage of exophoric (thus correct) interpretations provided by her subjects was 20% (average) only. Although the older children at 9;0-11;0 performed better than the others, the percentage of exophoric responses was merely 47%, indicating that many of these subjects incorrectly interpreted the blocked backward constructions.

To turn now to another issue, I will examine the relationship between the overall results of Experiment Two and children's processing strategies, including what I will call the 'Discourse Topic Strategy' (DTS) and the 'Recency Strategy' (RS), as outlined in (5)-(6).

(5) Select the discourse topic as antecedent.
(6) Take the last-mentioned NP as antecedent.

Note that if children consistently use the DTS, they will achieve a high level of exophoric interpretation for all types of backward anaphora. This prediction, however, does not seem to be well supported by the behaviour of children in general. While the behaviour of the children in G3-G5 on the *B(SO) structures (see

Table 2) seems to support the prediction, the DTS does not explain why the older children in G1-G5 preferred the endophoric interpretation for the B(OS) and *B(OG) types. It is also to be noted that the performance of the two youngest groups (K1 and K2) seems to be completely inconsistent with the prediction made by the DTS.

Still another explanation for the observed facts might be based on the assumption above that children seem to be able to remember better what has been mentioned last (most recently), as in (6). Since the most recent lexical NPs occur within the test sentence for all types of backward anaphora, the RS predicts that children will give a high frequency of *endophoric* interpretations. The prediction of the RS receives support from the response pattern of the two youngest groups (K1 and K2) who used the discourse context only 6%-31% (see Table 2). The behaviour of the older children in G3-G5, however, does not support the RS, since they succeeded in interpreting the reflexive in, at least, *B(SO), B(GO), or B(OS) exophorically.

A question still remains unanswered with respect to why the *B(SO) type was treated differently from the *B(OG) or B(OS) constructions by the children in G1-G5, in particular. To explore this problem, I make an attempt to develop 'linguistic' explanations. First of all, note the difference between the means for first and third columns, B(OS) and *B(SO) (37% vs. 67%). Notice also that in the blocked type *B(SO), the reflexive functioning as S is *higher* than the NP that follows it, namely O. I take this to suggest that the child knows that coreference is blocked if the reflexive is higher than the NP that follows it. I would therefore like to propose that children know that subjects are higher than direct objects in the hierarchy (see (7b)) and that they have a principle resembling (7a).

(7) a. The reflexive can only precede a higher antecedent.
b. S > ..O ..G

The child's principle (7a) blocks coreference in *B(SO), since the reflexive (S) precedes a lower antecedent (O) in violation of (7a). On the other hand, the principle allows coreference in B(OS), since the reflexive (O) in this structure precedes a higher antecedent (S). This is reflected in Table 2 since children in G1-G3, in particular, allowed coreference between the reflexive and a third person NP for B(OS) significantly more often than for *B(SO).

Notice that the constraints in (7) are not overtly manifested in the way G5 interpreted B(OS)and *B(SO).

As Table 2 indicates, children in G5 used the topic context 86%-97% of the time for both B(OS) and *B(SO). Importantly, however, recall that free backward type B(OS) can be correctly interpreted either exophorically or endophorically. It seems then reasonable to think that the older children G5 could store and retrieve information better than younger children and were thus able to use it more frequently for both structures when it was needed.

Consider now *B(OG) which is a blocked case and thus should be interpreted exophorically only. As is evident in the table, however, most children misinterpreted it by ignoring the discourse topic (this is especially evident in K1-G3). On the basis of this, I suggest that these children have not yet learned the relationship between G and O in the hierarchy. The child's hierarchy would therefore resemble (7b) in which the subject is higher than the object, while the object and the genitive are not ordered with respect to each other. Because the hierarchy is incomplete, children initially lack the means to block coreference in *B(OG). There is, however, gradual improvement since G5 children gave exophoric responses 61% of the time. On the basis of this development, I propose that the next version of the hierarchy to develop in children is (7c).

(7c) S > O > G

In Tables 1 & 2 we can also note that a gradual increase in the frequency of the exophoric interpretation occurred with age in Experiment Two, but not in Experiment One. In particular, in Experiment Two the discourse topic significantly affected the interpretation of the reflexive only in children older than G1 (mean 7;1). Very importantly, children's sensitivity to the discourse topic was highly *selective*. That is, the degree to which the context was used seemed to be governed by the type of backward anaphora. As we saw earlier, the older children used the discourse topic more often for *B(SO) and B(GO) than for *B(OG) or B(OS). The two younger groups (K1-K2), on the other hand, used the context infrequently (6-31% of the time) for all types of backward anaphora.

<u>Summary and Conclusion.</u> It was found that in general the topic context had a greater effect on children's interpretation than did the neutral context. It was also noted that children's sensitivity to the topic context increased with age. Unlike the subjects studied by Tyler (1983:335), it was the older children (G1-G5) who used context more frequently. Importantly,

their sensitivity to context was highly *selective* in that it was strongest for *B(SO) and, particularly in G5, B(OS). Hence, the effect was not the same across all four types of backward anaphora and all groups of children. It was also noted that while the Recency Strategy was best supported by the behaviour of the children in K1 and K2, all the strategies failed to explain the fact that the two *B cases were each treated in a significantly different manner by older groups. It was also proposed that the children had probably formulated a hierarchy in which S is higher than O and a principle that coreference is blocked if the reflexive is higher than its antecedent. In light of the fact that G5 gave many exophoric (thus correct) responses to *B(OG), it was also proposed that the next stage in the development of hierarchy is the addition of the component 'O>G'.

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Bibliography

Cho, Sook Whan. 1985. Issues in the structure and acquisition of Korean anaphora. Edmonton: The University of Alberta Ph.D. thesis.

O'Grady, William D. 1984. A non-configurational approach to Korean anaphora. Paper presented at the Western Conference on Linguistics, Vancouver at the University of British Columbia.

Suzuki-Wei, Yoshiko. 1985. The acquisition of Japanese pronouns. Calgary: The University of Calgary M.A. thesis.

Tyler, Lorraine K. 1983. The development of discourse mapping processes: The on-line interpretation of anaphoric expressions. Cognition, 13, 309-341.